



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

February 6, 2004

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

TO: Interested Parties / Applicant

RE: Superior Environmental Remediation, Inc. / 127-18335-00101

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot 9/16/03



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February 6, 2004

Mr. Gary Richards
Superior Environmental Remediation⁹⁰, Inc.
1516 North Main Street
Mishawaka, Indiana 46545

Re: Exemption Construction and Operation Status,
127-18335-00101

Dear Mr. Richards:

The application from Superior Environmental Remediation⁹⁰, Inc., received on November 14, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following soil vapor extraction and groundwater treatment system, to be located at 526 West U.S. Highway 30, Valparaiso, Indiana, are classified as exempt from air pollution permit requirements:

- (a) One (1) soil vapor extraction and treatment system capable of handling a maximum of 350 acfm of vapor. The system is equipped with a carbon adsorption system, which exhausts at stack SVE-1. This unit was constructed in 2003.
- (b) One (1) groundwater recovery process capable of handling 29,880 pounds of water per hour. The system is equipped with one (1) 1,500 gallon holding tank and two (2) 1,200 lb carbon adsorption vessels. This unit was constructed in 2003.

The following conditions shall be applicable:

- (1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
 - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
- (2) Pursuant to 326 IAC 8-9-6 (Volatile Organic Liquid Storage Vessels), the Permittee shall record and submit to IDEM, OAQ a report containing the following information for the 1,500 gallons storage vessels:
 - (a) The vessel identification number.
 - (b) The vessel dimensions.

(c) The vessel capacity.

The Permittee shall keep all records as described in (a) and (c) for the life of the vessel.

This exemption is the first air approval issued to this source.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Ms. Amanda Baynham, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7910 to speak directly to Ms. Baynham. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/AAB

cc: File - Porter County
Porter County Health Department
Air Compliance - Rick Massoels
Northwest Regional Office
Permit Tracking - Sara Cloe
Technical Support and Modeling - Michele Boner
Compliance Branch

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD) for a Exemption

Source Background and Description

Source Name: Superior Environmental Remediation⁹⁰, Inc.
Source Location: 526 West U.S. Highway 30, Valparaiso, Indiana 46385
County: Porter
SIC Code: 8999
Operation Permit No.: 127-18335-00101
Permit Reviewer: ERG/AAB

The Office of Air Quality (OAQ) has reviewed an application from Superior Environmental Remediation⁹⁰, Inc. relating to the construction and operation of a soil and groundwater remediation system.

Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) soil vapor extraction and treatment system capable of handling a maximum of 350 acfm of vapor. The system is equipped with a carbon adsorption system, which exhausts at stack SVE-1. This unit was constructed in 2003.
- (b) One (1) groundwater recovery process capable of handling 29,880 pounds of water per hour. The system is equipped with one (1) 1,500 gallon holding tank and two (2) 1,200 lb carbon adsorption vessels. This unit was constructed in 2003.

Existing Approvals

This is a new source. No previous approvals have been issued to this source.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (inch)	Flow Rate (acfm)	Temperature (°F)
SVE-1	Soil Vapor Extraction System	15.0	4.0	350.0	90

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on November 14, 2003, with additional information received on December 8 and 29, 2003.

Emission Calculations

See Appendix A of this document for detailed emission calculations (Appendix A, 1 page).

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential to Emit (tons/yr)
PM	0.00
PM-10	0.00
SO ₂	0.00
VOC	5.22
CO	0.00
NO _x	0.00

HAPs	Potential to Emit (tons/yr)
Benzene	1.21
Toluene	1.61
Ethylbenzene	0.142
o-xylenes	0.139
m+p xylenes	0.33
MTBE	0.008
Hexane	1.77
2-Butanone	0.004
Total HAPs	5.22

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than the levels listed in 326 IAC 2-1.1-3(d)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.

(c) Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Porter County.

Pollutant	Status
PM-10	Unclassifiable
SO ₂	Unclassifiable
NO ₂	Attainment
Ozone	Severe Nonattainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. The area of Porter County in which this source is located has been designated as nonattainment for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability for the source section.
- (b) Porter County has been classified as attainment or unclassifiable for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD) (326 IAC 2-2).

Source Status

New Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	0.00
PM-10	0.00
SO ₂	0.00
VOC	5.22
CO	0.00
NO _x	0.00
Single HAP	1.77
Combination HAPs	5.22

- (a) This new source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) This new source is not a major stationary source because VOC (which is a precursor of ozone) is not emitted at a rate of 25 tons per year or greater. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This is the first air approval issued to this source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.

Although constructed after July 23, 1984, the storage tank is not subject to 40 CFR 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (326 IAC 12), because this tank has a storage capacity of 1,500 gallons. Although the applicability section for 40 CFR 60, Subpart Kb was revised in October 2003, the previous version of this rule is incorporated into the state rules in 326 IAC 12 and 326 IAC 1-1-3. Under this previous version of 40 CFR 60, Subpart Kb, storage tanks with capacities less than 10,500 gallons are exempt.

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) applicable to this source.
- (c) This source is not subject to the requirements of 40 CFR 63, Subpart GGGGG-National Emission Standards for Site Remediation because this source is not a major source of hazardous air pollutants as defined in 40 CFR 63.2.

State Rule Applicability – Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Porter County and the potential to emit of VOC and NO_x are less than ten (10) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability – Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of soil vapor extraction and groundwater recovery operations will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

Although constructed after January 1, 1980, the soil vapor extraction and groundwater recovery operations are not subject to the requirements of 326 IAC 8-1-6 because the potential VOC emissions are less than twenty-five (25) tons per year.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

The 1,500 gallon storage vessel is subject to the following recordkeeping requirements of 326 IAC 8-9-6(a) and (b) because this storage tank is located in Porter County and is used to water containing volatile organic compounds:

(a) Pursuant to 326 IAC 8-9-6 (Volatile Organic Liquid Storage Vessels), the Permittee shall record and submit to IDEM, OAQ a report containing the following information for the 1,500 gallons storage vessels:

- (1) The vessel identification number.
- (2) The vessel dimensions.
- (3) The vessel capacity.

The Permittee shall keep all records as described in (a) and (c) for the life of the vessel.

The source is not subject to the requirements of 326 IAC 6-3 because none of the emission units at this source emits particulate.

Conclusion

The construction and operation of this soil and groundwater remediation system shall be subject to the conditions of this exemption (127-18335-00101).

Appendix A: Emissions Calculations
VOC and HAP Emissions from Soil Extraction System

Company Name: Superior Environmental Remediation
Address: 526 West U.S. Highway 30, Valparaiso, IN 46545
Permit No. : 127-18335
Plt ID: 127-00101
Reviewer: ERG/AAB
Date: January 22, 2004

HAP*	Concentration (ppm)	Molecular Weight (g/mole)	Exhaust Flow Rate (acfm)	HAP Emissions (lbs/hour)	HAP Emissions (tons/yr)
Benzene	65.00	78.11	350	0.277	1.21
Toluene	73.00	92.40	350	0.368	1.611
Ethylbenzene	5.60	106.17	350	0.032	0.142
o-xylenes	5.50	106.17	350	0.032	0.139
m + p xylenes	13.00	106.17	350	0.075	0.330
MTBE	0.40	88.15	350	0.002	0.008
Hexane	86.00	86.18	350	0.404	1.77
2-Butanone	0.22	72.10	350	0.001	0.004
Total HAPs					5.22

*- All VOCs are also HAPs; therefore, total HAP PTE equals VOC PTE.

Methodology:

$$\text{PTE (tons/yr)} = (\text{HAP conc. (ppm)}) \times (\text{Molecular Weight (g/mol)} / 385.1 \text{E}6) \times (\text{Exhaust Flow (acfm)} \times 60 \text{ min/hr}) \times (8760 \text{ hrs/yr}) \times (1 \text{ ton} / 2000 \text{ lbs})$$

Conversion factor from AP-42, Appendix A (9/85)